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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,928	10/10/2001	Tooru Ooiwa	110814	4844

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EXAMINER

MULLINS, BURTON S

ART UNIT PAPER NUMBER

2834

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,928

Applicant(s)

OOIWA, TOORU

Examiner

Burton S. Mullins

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 18 is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on October 10, 2001 has been considered by the examiner.

Specification

3. The disclosure is objected to because of the following informalities: On p.6, lines 22-25, the syntax of this sentence is improper. Similarly, the syntax of the sentence on p.10, line 26-p.11, line 2 is improper.

On p.4, lines 7-13, p.10, lines 14-20, and the abstract, lines 10-14, the phrase "magnetic coating...[breaking] within the base material" is not understood. The tensile strength of the magnetic coating is disclosed as lower than the bonding strength of the magnetic coating with the surface to which the coating is applied. Therefore, when subjected to external contact force, the coating will not peel, due to the higher bonding strength, but instead "breaks within the base material." What does it mean for the coating to "break within the base material." Is the "base material" the coating itself? In other words, since the tensile strength of the magnetic coating is lower than the bonding strength, will the coating "break" before the coating peels off the surface? Appropriate correction and clarification is required.

Claim Objections

4. Claim 1 is objected to because of the following informalities: On line 8, insert --a-- before "magnetic coating". On line 9, change "particle" to ---particles---. Appropriate correction is required.
5. Claim 2 is objected to because of the following informalities: On line 5, capitalize "roundel". Appropriate correction is required.
6. Claim 13 is objected to because of the following informalities: On line 6, change "rotating" to ---rotating---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 13, recitation "the core" and "the pole" on lines 11-17 lack antecedent basis. Presumably these are the stator core and rotor poles, respectively. Also, recitation "the pole and the stator define a third air gap, the stator and the pole further define the third air gap" makes no sense.

Allowable Subject Matter

9. Claims 1-12 and 18 are allowed pending changes to correct the objections noted above. Claims 13-17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Aoki et al. (US 5,836,270) does not teach the claimed alternator rotor-stator structure including, inter alia, four air gaps in combination with a magnetic coating on at least one of the field or the core defining the first air gap (claim 13).

Lindgren (US 5,625,243) teaches a ferromagnetic outer coating layer 7b (Fig.6) applied to the squirrel-cage rotor 2 of an asynchronous machine to prevent eddy currents and lower the power factor (c.2, lines 39-41). Lindgren does not teach that the coating has the claimed bonding and tensile strengths (claims 1 and 18).

Photiadis et al. (US 3,539,853) teaches a heat transfer coating/layer 28 applied between frame 12 and stator laminations 11, not in the air gap 17.

Jordan (US 3,646,374) applies a polyester resin coating to the core members. There is no teaching that the coating is magnetic and possesses the claimed bonding and tensile strengths.

Jackson (US 4,293,785) teaches a coating which enhances radiative heat exchange therebetween. However, there is no teaching that the coating is magnetic and possesses the claimed bonding and tensile strengths.

Khan (US 6,242,831) teaches a low surface energy coating for reduced stiction applied between a rotor 15 and shaft 13. There is no teaching that the coating is magnetic and used in the air gap between the motor rotor and stator.

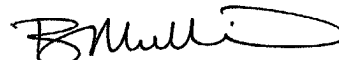
Powers (US 3,163,788) teaches a copper layer 44 applied to rotor 30, not a magnetic coating.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.


Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
November 1, 2002